

IN THE CLAIMS:

The following amendment is made to the claims as originally filed.

1. (Currently Amended) A method ~~for operating~~ to operate a channel coder, comprising ~~steps of:~~

maintaining a first count (N_Number) of transmitted packets and a second count (K_Number) of packets that are erroneously decoded at a receiver;

periodically performing a plurality of statistical tests using current values of the first and second counts to derive a confidence measure of the reliability of a measured packet error rate; and

based on said confidence measure ~~a result of said statistical tests~~, controlling said channel coder to either maintain a current channel coding technique or to switch to another channel coding technique.

2. (Currently Amended) A method as in claim 1, wherein ~~said step of~~ controlling is comprised of ~~a further step of~~ resetting said first count and said second count.

3. (Currently Amended) A method as in claim 1, wherein ~~the step of~~ periodically performing a plurality of statistical tests is comprised of ~~steps:~~

at a crossing point where a first channel coding algorithm (CS-1) and a second channel coding algorithm (CS-2) provide a same net bit rate, ~~assuming as a first hypothesis making a first assumption~~ that a packet error rate (PER) is greater than a PER of CS-1 at the crossing point, P1, if when CS-1 is currently being used, or ~~assuming as the first hypothesis making as the first assumption~~ that the PER is less than a PER of CS-2 at the crossing point,, P2, if when CS-2 is currently being used;

~~assuming~~ making as a further assumption, as reference case, that N_Number of packets

have been transmitted with a constant PER equal to either P1 or P2, depending on the currently used channel coding algorithm CS-1 or CS-2;

determining a first probability (P-value) using said first count and said second count and the constant PER P1 or P2, depending on the currently used channel coding algorithm CS-1 or CS-2;

comparing P-value to a risk level (RL) for determining whether the first hypothesis assumption can be rejected; and

~~only if~~ when the first hypothesis assumption is rejected, changing to the other channel coding algorithm and resetting N_Number and K_Number;

~~assuming as a second hypothesis~~ making a second assumption that PER is less than the PER of CS-1, P1, if when CS-1 is currently being used, or ~~assuming as the second hypothesis~~ making as the second assumption that PER is greater than the PER of CS-2, P2, if when CS-2 is currently being used;

~~assuming~~ making as the same further assumption, the same reference case, that N_Number of packets have been transmitted with a constant PER equal to either P1 or P2, depending on the currently used channel coding algorithm CS-1 or CS-2;

determining a second probability (P-value) using said first count and said second count and the constant PER P1 or P2, depending on the currently used channel coding algorithm CS-1 or CS-2;

comparing P-value to RL for determining whether the second hypothesis can be rejected; and

~~only if~~ when the second hypothesis assumption is rejected, resetting N_Number and K_Number without changing to the other channel coding algorithm.

4. (Currently Amended) A method as in claim 1, wherein ~~the step of~~ periodically performing a plurality of statistical tests comprises ~~steps of~~:

accessing at least one look-up table using the current values of the first and second counts to retrieve a probability value (P-value); and

comparing the retrieved P-value to a threshold to determine whether an assumed hypothesis should be accepted or rejected.

5. (Cancelled)

6. (Cancelled)

7. (Currently Amended) A method ~~for operating a channel coder~~ to operate a wireless packet data system, comprising ~~steps of~~:

while operating with a first channel coding technique, updating a first count (N_Number) of transmitted packets and a second count (K_Number) of packets that are erroneously decoded at a receiver; and

periodically performing a plurality of statistical tests using current values of the first and second counts, wherein the step of periodically performing the plurality of statistical tests is comprised of ~~sub-steps of~~,

determining if whether a first assumption hypothesis is rejected, and ~~if yes~~ when it is determined to be rejected, switching to a second channel coding technique, and resetting the first and second counts, before continuing the updating of the first and second counts ~~step of averaging~~; while if when the first assumption hypothesis is accepted,

determining if whether a second ~~hypothesis~~ assumption is rejected, and ~~if yes~~ when it is determined to be rejected, resetting the first and second counts, before continuing the updating of the first and second counts ~~step of averaging~~; while if when the second

~~hypothesis assumption~~ is also accepted,

continuing the updating of the first and second counts ~~step of averaging~~ without first resetting the first and second counts.

8. (New) A wireless communications system that outputs packets from a channel coder of a transmitter for input to a channel decoder of a receiver, comprising a first controller that operates using current values of a number of transmitted packets (N_Number) and a number of erroneously decoded packets (K_Number) to perform statistical tests to determine a confidence measure of a reliability of packet reception and, based on the determined confidence measure, that operates to signal a second controller to either continue using a current channel coding algorithm or to use a different channel coding algorithm.

9. (New) A wireless communications system as in claim 8, where said first controller resets values of N_Number and K_Number in response to signalling said second controller.

10. (New) A wireless communications system as in claim 8, where said first controller performs the statistical tests by, at a crossing point where a first channel coding algorithm (CS-1) and a second channel coding algorithm (CS-2) provide a same net bit rate, making a first assumption that a packet error rate (PER) is greater than a PER of CS-1 at the crossing point, P1, when CS-1 is currently being used, or making as the first assumption that the PER is less than a PER of CS-2 at the crossing point, P2, when CS-2 is currently being used; by making as a further assumption, as a reference case, that N_Number of packets have been transmitted with a constant PER equal to either P1 or P2, depending on the currently used channel coding algorithm CS-1 or CS-2; by determining a first probability (P-value) using N_Count and K_Count and the constant PER P1 or P2, depending on the currently used channel coding algorithm CS-1 or CS-2; by comparing P-value to a risk level (RL) for determining whether the first assumption can be rejected and, when the first assumption is rejected, changing to the other channel coding algorithm and resetting N_Number and K_Number; and by making a second assumption that PER is less than the PER of CS-1, P1, when CS-1 is currently being used, or making as the second assumption that PER is greater than the PER of CS-2, P2, when CS-2 is currently being used; making as the same further assumption, the same reference case, that

N_Number of packets have been transmitted with a constant PER equal to either P1 or P2, depending on the currently used channel coding algorithm CS-1 or CS-2; by determining a second probability (P-value) using said first count and said second count and the constant PER P1 or P2, depending on the currently used channel coding algorithm CS-1 or CS-2; by comparing P-value to RL for determining whether the second assumption can be rejected; and when the second assumption is rejected, resetting N_Number and K_Number without changing to the other channel coding algorithm.

11. (New) A wireless communications system as in claim 8, where said first controller performs the statistical tests by accessing at least one look-up table using as indices N_Count and K_Count to retrieve a probability value (P-value), and by comparing the retrieved P-value to a threshold to determine whether an assumed hypothesis should be accepted or rejected.

12. (New) A wireless communications system as in claim 8, where one of said transmitter and receiver comprises a mobile station.